INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year:	**Park:**
1999	Shenandoah NP
Principal Investigator:	**Office Phone:**
Craig Snyder	(304) 724-4468
	Email:
	Craig_Snyder@usgs.gov
Address:	**Office Fax:**
U.S. Geological Survey (BRD) Leetown Science Center Aquatic Ecology Laboratory 1700 Leetown Road Kearneysville, WV 25430 US	(304) 724-4465

Additional investigators or key field assistants (first name, last name, office phone, office email):

Name: David P. Lemarie	**Phone:** (304) 724-4463	**Email:** n/a
Name: Zane B. Johnson	**Phone:** (304) 724-4478	**Email:** n/a

Permit#:
SHEN1999N-231

Park-assigned Study Id. #:
unknown

Project Title:
Long Term Recovery Of Macroinvertebrate Populations After A 500+ Year Flood Event In Shenandoah National Park

Permit Start Date:	**Permit Expiration Date**
Jan 01, 2000	Jan 01, 2000
Study Start Date:	**Study End Date**
Jan 01, 1998	Jan 01, 2001

Study Status:
Completed

Activity Type:
Research

Subject/Discipline:
Ecology (Aquatic, Marine, Terrestrial)

Objectives:
The objective of this investigation is to determine aquatic macroinvertebrate responses and recovery patterns to the June 1995 flood on the Staunton River. This will involve comparing community structure and secondary production patterns in reaches within and outside the impacted zone of the Staunton.

Findings and Status:
In March and April of 1999 we conducted a Spring macroinvertebrate survey of 18 sites (ten on the Staunton River and eight on Whiteoak Canyon Run) collecting composite-type samples. No data are available yet for the Spring survey, as work on Fall 1998 survey is continuing. Approximately 60 taxa (most at generic and specific levels) have been identified from the Fall survey, and more are likely to be identified as work continues.;Quantitative samples for secondary production were taken at two sites on the Staunton River and two comparable sites on the reference stream. Fifteen production samples were taken at each site on 13 sampling dates in 1999 (Jan. through Nov.). Classification of instream habitat based on substratum type and particle size, and water depth and velocity was done along with sampling, for use in calculating habitat-specific production. An image analysis system using SigmaScan Pro v. 4.0 software is being used to measure length and area of preserved specimens. These data will be used to determine size-weight relationships of macroinvertebrate taxa needed for secondary production calculations.

For this study, were one or more specimens collected and removed from the park but not destroyed during analyses?
No

Funding provided this reporting year by NPS:	**Funding provided this reporting year by other sources:**
0	62297

Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college	
Full name of college or university:	**Annual funding provided by NPS to university or college this reporting year:**
n/a	0